REINVENTING HIGHER EDUCATION

The Promise of Innovation

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Editors

2011

HARVARD EDUCATION PRESS
CAMBRIDGE, MASSACHUSETTS

Introduction

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AMERICANS ARE ASKING much of their colleges and universities. A slew of public and philanthropic leaders, including President Obama, have called for a dramatic increase in the number of citizens earning college degrees. Observers of globalization point to the need for U.S. universities to keep up with the rest of the world in today's highly competitive educational marketplace.

But far from being poised to meet the challenge, the U.S. higher education system seems more beleaguered every day. State law makers have withdrawn billions of dollars in public funding. Tenure-track jobs are becoming increasingly scarce. While technology has transformed much of society, many public and private nonprofit institutions seem permanently set in ways that were established decades or even centuries ago. The only part of college not mired in tradition is the price.

The result is growing frustration with and within a part of society that has long enjoyed great esteem. Chasing after more dollars in an austere fiscal environment and funneling resources into the same old system won't solve this problem. Higher education has to change. It needs more innovation.

This notion cuts against the common perception of American higher education as the best and most diverse system of postsecondary learning the world has ever seen. It's true that the United States has the lion's share

of the world's great research universities and a fabulous array of institutions from which to choose: public and private, religious and nondenominational, single-gender and minority-serving, urban and rural, gigantic and small. With so much excellence and variation, the argument goes, who could reasonably ask for more?

But these impressions can be deceiving. Beneath a relatively thin layer of world-class research universities and elite liberal arts colleges lies a system that has too often proved shockingly bad at helping most undergraduates earn credentials.

More students than in recent decades are now starting college—about seven in ten high school graduates, up from 50 percent in 1970. But barely half graduate on time, and many don't graduate at all. Results for low-income students, first-generation college goers, and the growing population of minority students are even worse. The majority of black and Latino students who enroll at four-year colleges as first-time, full-time freshmen fail to earn a bachelor's degree within six years. For nontraditional students, the odds are even more daunting. Only 7.3 percent of single parents who enroll in college hoping to earn a bachelor's degree get one within six years. Forty-six percent drop out, with the rest still struggling in college or settling for a lower-value credential. For students who delay going to college after high school, the equivalent success rate is 13.7 percent. For students who work full-time, 10.7 percent. For students whose parents don't help them financially, 7.7 percent.

Higher education has swelled with nontraditional students in recent decades, but the system has not evolved to serve them in effective, nontraditional ways. That's why some 38 million working-age adults report their highest level of education as "some college, no degree." This represents a massive loss of human potential at a time when the nation's social fabric and economic vitality increasingly depend on a well-educated citizenry.

Meanwhile, the scant available information about college student learning suggests that too many graduates leave school lacking the ability to think, analyze, and communicate. According to *Academically Adrift: Limited Learning on College Campuses*, a much-noted recent book by sociologists Richard Arum and Josipa Roksa, fully 45 percent of undergraduates show no statistically significant gains in critical thinking, complex reasoning, or written communications during their first two years of college. Over four years, further research by the authors found, more than one-third of students show no real learning gains. "[L]arge numbers of U.S. college students can be accurately described as academically adrift," Arum and Roksa wrote in the *Chronicle of Higher Education*. "They might graduate, but they are failing to develop the higher-order cognitive skills that it is widely assumed college students should master."[1]

This kind of slipshod quality control may once have been tolerable; as long as a few people were smart enough to found the businesses and lead the institutions that serve the wider society, the rest could manage. With revolutionary advances in communication and transportation knitting human societies together worldwide and other countries quickly ramping up degree production, the United States no longer has that luxury. Social and economic trends within the country have led to a new imperative in American educational opportunity: all comers should have the chance to gain some postsecondary experience. And every student willing to work hard enough for a degree should be able to earn one, and learn something in the bargain.

The higher education system also betrays an innovation deficit in another way: a steady decline in productivity driven by a combination of static or declining output paired with skyrocketing prices. According to the nonprofit College Board, tuition and fees for students studying in state at public universities increased by an average of 5.6 percent annually over the last decade, after adjusting for inflation. This marks the acceleration of a three-decades-long trend of college prices increasing steadily in good economic times and bad, and faster than inflation, family income, or even the health-care costs that are famously jeopardizing America's long-term solvency. While the net price of college (after accounting for financial aid) has not grown as quickly, thanks to significant federal investments in financial aid, the bleak federal budget outlook makes it unlikely that future tuition hikes will be similarly offset.

And while colleges differ from one another in some respects, they are remarkably similar in others. With few exceptions, they offer the same degrees in the same way, counting the number of hours students are taught and adding them up to two- and four-year credentials. They hire people with similar pedigrees and organize them into the standard apparatus of academic departments. Teaching, tenure, and titling policies vary little from place to place. They field athletic teams, joust in obscure journals, and complain about overpaid administrators in much the same way, everywhere. All of this adds up to long-term stagnation and a profound lack of imagination about the possibilities of change.

We are not the first to make these observations. In recent years, a growing chorus of critiques has come from inside and outside the academy. After decades of taking a mostly hands-off approach, federal policy makers began questioning the core work of higher education during the second term of President George W. Bush. U.S. Secretary of Education Margaret Spellings convened a distinguished panel of experts, many with deep roots in the academy, to conduct a top-to-bottom examination of the nation's colleges and universities. Their findings were disconcerting:

> What we have learned over the last year makes clear that American higher education has become what, in the business world, would be called a mature enterprise: increasingly risk-averse, at times self-satisfied, and unduly expensive. It is an enterprise that has yet to address the fundamental issues of how academic programs and institutions must be transformed to serve the changing needs of a knowledge economy. It has yet to successfully confront the impact of globalization, rapidly evolving technologies, an increasingly diverse and aging population, and an evolving marketplace characterized by new needs and new paradigms.[2]

Higher education leaders may have expected a respite with the election of President Obama in 2008. Instead, the president's first address to Congress declared that our higher education system was inadequate, having fallen behind competitor nations in helping adults earn credentials. His

subsequent proposals have broken new ground in suggesting that Uncle Sam should step outside the traditional role of funding student financial aid and university-based research to pursue a more aggressive strategy of funding efforts that seek to improve degree completion—and demanding accountability for results in return for federal funds.

Meanwhile, a host of books and scholarly works have examined the flaws of higher education. *College*, Ernest Boyer's prescient 1988 survey of the undergraduate experience, identified many of the fundamental weaknesses in the system. Most went unaddressed. Nearly two decades later, a higher education leader of similar stature sounded the same notes. In his 2007 volume *Our Underachieving Colleges*, former Harvard president Derek Bok wrote that "colleges and universities, for all the benefits they bring, accomplish far less for their students than they should." Others soon followed. Robert Zemsky's *Making Reform Work: The Case for Transforming American Higher Education* asserts that higher education's ingrown unwillingness to change must be dislodged by fundamental, not incremental, change. Mark Taylor's *Crisis on Campus*, released in 2010, calls for the wholesale revamping of venerable institutions like academic departments and faculty tenure. "The Universities in Trouble," Andrew DelBanco's well-regarded 2009 higher education critique in the *New York Review of Books*, also raised a loud alarm.

While varied and frequently uncompromising, these criticisms are still situated within the higher education system itself. They aim to right the ship, but they do not question the fundamental form of the ship or the need for it to progress in the same general direction. Their solutions, moreover, depend on the willingness of long-established institutions to reform themselves. Other critics are less wedded to the ideal of the university as we now understand it. In one way or another, they all see the raging information technology revolution as the key to a whole new world of higher learning.

This, too, is not virgin territory. Diana Oblinger and Sean Rush's *The Learning Revolution: The Challenge of Information Technology in the Academy* was published in 1996, in the very early days of the Internet revolution.

In its wake, the enthusiasm surrounding the dot-com boom prompted many observers to forecast the destruction of brick-and-mortar colleges on a time line that is rapidly approaching present day. These predictions of the traditional university's demise proved premature. But in applying the "disruptive innovation" paradigm to education in their 2008 book *Disrupting Class: How Disruptive Innovation Will Change the Way the World Learns*, Clayton Christensen and his coauthors argued that education is still likely to experience the kind of earthshaking changes in cost, control, and mode of delivery that technology has visited on industries ranging from semiconductors and automobiles to music, publishing, banking, and journalism. Institutional resistance and barriers to change embedded in public policy may slow the pace of change, they assert, but the trend will move only in one direction. Journalist Anya Kamenetz's recent book *DIY U: Edupunks, Edupreneurs, and the Coming Transformation of Higher Education* projects these developments forward to an approaching world in which higher learning shifts fundamentally from an institution-centered model to one that is mobile, flexible, technology empowered, and student centered. For most students, she contends, this world will bear little resemblance to the higher education experience that has persisted in various forms for the better part of the last five hundred years.

We believe that the most important questions of higher education innovation will, for the foreseeable future, reflect both the institutional and disruptive perspectives. Colleges and universities still enjoy massive levels of social and financial capital. The duties they perform and the values they represent cannot and should not be easily discarded. At the same time, it would require willful blindness to assume that institutions created and sustained by the production and distribution of knowledge will escape transformation by technologies that have radically altered the cost and speed of storing, moving, and analyzing information. Institutions built from ancient stone (or even brick and concrete) tend to see their ways of working as written in similarly permanent material. This has been a safe bet for a long time. It is no longer so.

There is a danger, of course, in assuming that all change is virtuous and all traditions are outdated. We ought not fetishize the new. Innovation is a slippery concept, one that is often used principally to flatter the self-styled pioneer.

But as the chapters in this volume demonstrate, higher education as a whole is inhospitable to innovation, properly understood. The depth of that understanding is also inadequate. To date, there has been relatively little systematic research on the prevalence and potential of innovation in American higher education. There are promising examples to be found, of course, and we highlight many of them here. But reformers' ideas about how to reorient higher education are still on the margins of discourse within the dominant traditional sector. Without a comprehensive set of policies to better understand and create more fertile ground for new ideas, today's pressing problems will become tomorrow's irresolvable crises.

The chapters in this book are roughly organized into three thematically related sections. The first assesses current barriers to higher education innovation and how to surmount them. The second examines how changes that have already occurred in the sector are altering the way professors and students interact with institutions in a variety of settings, including traditional research universities, community colleges, and growing for-profit institutions. The third looks to the future in examining higher education institutions that are just coming into existence—or, through the power of information technology, are not institutions in the traditional sense of the word at all.

Dominic Brewer and William Tierney of the University of Southern California begin by sketching the innovation landscape as it exists today. While research practices have steadily evolved, they note, teaching has largely stayed the same. That's because colleges lack incentives to teach differently, or well. Large government subsidies insulate public institutions from market competition, and the enrollment-based nature of those subsidies creates few incentives for colleges to help students learn and earn degrees. Government regulators act as a brake on competition by limiting entrance to the market. By forcing new institutions to adopt the

organizational norms of old institutions, accreditors foster risk aversion and standardization. Powerful higher education lobbying organizations help preserve the status quo.

Veteran higher education journalist Jon Marcus goes back even further, to pre-Revolutionary America, to document how higher education has always been slow to change. True innovations, Marcus contends, rarely come voluntarily from within established institutions. Major technological and social change originating outside the academy can do the trick, as with women's suffrage, civil rights, and the rise of the Internet. Otherwise, it takes new colleges to advance new ideas. Marcus provides a case study of one such institution, Harrisburg University of Science and Technology in Pennsylvania, which has taken a rare fresh sheet of institutional canvas and thrown out many of the conventions that are sacrosanct elsewhere.

Former Stanford University vice president William Massy tackles an enduring higher education myth: that colleges are doomed to inefficiency due to their labor-intensive business model. In fact, Massy finds, colleges can increase performance and lower costs just like everyone else, using new organizational models and the power of information technology. The well-regarded National Center for Academic Transformation (NCAT), for example, has cut spending and increased learning in hundreds of introductory college courses nationwide. Like Marcus, Massy finds that new institutions are far more open to innovation than old ones.

Economist Ronald Ehrenberg, director of the Cornell Higher Education Research Institute, focuses on one such convention: faculty tenure. This is a case where fundamental change is happening not by sudden flash of inspiration but by the steady erosion of tenure-track jobs. Ehrenberg analyzes (somewhat ruefully) the many cultural, financial, and institutional causes of this phenomenon and offers predictions for how information technology and new career models could provide better alternatives to the current mix of tenure lottery winners and exploited adjunct instructors.

Paul Osterman, economist at the MIT Sloan School of Management, follows by looking inside the neglected two-year sector, which enrolls nearly half of all new students but receives a far smaller portion of public funding, media attention, and scrutiny from scholars. Osterman notes that the best community colleges—lean, student-focused, and connected to the workforce—are a prime source of innovative practices that other colleges could emulate. At the same time, the two-year sector as a whole has deep problems, with barely more than one-third of all students graduating or transferring to a four-year school. Only by sharpening community colleges' often incoherent missions and matching new resources with accountability for results, Osterman says, will best practices become widespread.

But as Guilbert Hentschke of the University of Southern California observes, most new universities, like Harrisburg University and the University of Minnesota–Rochester, are not traditional public or nonprofit institutions. The real action is in the fast-growing for-profit sector, which is absorbing a larger percentage of college students and federal financial aid revenue every year. While acknowledging the problem of abuses in the for-profit industry, Hentschke finds the sector as a whole to be a hotbed of new organizational models and business practices. For-profits are far more growth-oriented than traditional institutions at a time when national leaders are calling for a major expansion in college attainment. They're also more sensitive to market demand than traditional colleges, which tend to teach what they want to teach rather than what students and employers need. The key, Hentschke argues, is to marry these virtues to improved consumer protection and greater quality control.

In the future, such policies will increasingly be focused on colleges that exist primarily or even exclusively online. Peter Stokes—vice president and chief research officer at the technology-focused consulting firm Eduventures—examines the hype and reality of higher education on the Internet, a medium where more than one-quarter of all college students are now learning. The roots of online learning are in distance education, early examples of which date to the eighteenth century. But the Internet has brought online higher education to the point, Stokes argues, where it could be a disruptive innovation that alters the college landscape in the same way that technology has dramatically transformed the music, publishing, banking, travel, and newspaper industries.

Finally, Kevin Carey provides a case study of the University of Minnesota–Rochester (UMR) and describes how this brand-new public university highlights the possibilities of innovation and reform. As in the case of Harrisburg University, described by Marcus, the administrators of UMR took the opportunity of starting from scratch to discard many long-cherished practices and create a focused, dynamic institution that makes full use of technology. Massy also cites UMR as an organization that puts the lie to the notion that low higher-education productivity is a chronic condition. UMR provides undergraduates with far more in the way of direct teaching and staff resources than the typical university at a fraction of the cost. Carey argues that if lawmakers in Minnesota can overcome the failure of imagination and bureaucratic hurdles cited by many of the chapter authors, other state leaders can do so as well, seeding a new generation of innovative institutions.

In sum, the authors describe a traditional higher education system in which innovation occurs in fits and starts, dependent on the whims of individual actors or the rare opportunity afforded by the creation of new institutions. Public and private nonprofit colleges lack strong enough incentives to overcome the forces of traditionalism and innovate at scale, and so they don't. Meanwhile, the burgeoning for-profit sector is spinning out new definitions of higher education at a rapid rate, but these innovations are often overlooked in debates about their profit motive. What the nation lacks is higher education innovation harnessed to public purpose: institutions rooted in a commitment to knowledge creation and student learning but open and eager to embrace better ways of realizing those goals. This volume provides a glimpse of what that future could look like. But there is much to accomplish in order to get from here to there.

1

Barriers to Innovation in U.S. Higher Education

Dominic J. Brewer and William G. Tierney

Virtually every major innovation of recent decades builds on the work of the university community . . . Countless innovations revolutionizing American life and the American economy have emerged from a university setting. Here we come to a paradox. Though the university community is a major force of innovation in our society, it is curiously resistant—even hostile—to innovations attempted within the university.[1]

HIGHER EDUCATION IS WIDELY lauded as an American success story.[2] Over four thousand public and private postsecondary institutions enroll some twenty-five million students.[3] During the past century, the sector has expanded greatly, providing educational opportunities for an increasingly diverse population and offering a plethora of courses of study, from certificates to doctorates in hundreds of subjects. New providers have emerged that are tailored to shifting student demands.[4] Universities continue to produce breakthrough scientific discoveries and inventions such that the research university remains a central driver for creative vibrancy across urban and regional areas.[5]

Yet despite this backdrop, there is increasing concern that the nation's colleges and universities are ill equipped to adapt to a rapidly changing environment and that traditional institutions are resistant to enabling new